

Hsin-Mao Hsieh
Application No. 10/034,116

Applicant respectfully requests that this amendment be entered in light of the discussion between Applicant's counsel and Examiners Pham and Tamni which took place on February 24, 2003, at Crystal Plaza 4 of the USPTO.

In the Office Action dated August 21, 2002, claims 1 and 3 are rejected under 35 U.S.C. §102(b) as being anticipated by Sun (U.S. Patent No. 6,034,461) (hereinafter "Sun"). Applicant submitted a response to this Action on November 15, 2002, in which Applicant explained that because each of the three key elements of Applicant's stator, i.e., the yoke (10), the upper insulator (20) and the lower insulator (21)), is formed as a single body (see Figure 1), as opposed to the corresponding elements in Sun, where each element is composed of two parts, Applicant's claimed invention is not anticipated by Sun.

Examiner Pham mailed an Advisory Action on December 5, 2002, in which she states that "[t]he examiner understands that each element of the stator is formed as a single body as shown in the figure 1 but the examiner does not reject figure 1 of the applicant, the examiner rejects what the applicant claimed in the invention which means the claim 1 of the present application does not claim each element of the stator forming as a single body."

In response to Examiner Pham's comments in the advisory action, Applicant chose to further amended claim 1 to clarify that the yoke, the upper insulator, and the lower insulator of claim 1 are each a single body. This amendment does not introduce new matter because as conceded by Examiner Pham and evident by the showing in Figure 1, these three structures are indeed a single body. In addition, this amendment does not further narrow or expand the scope of the claim because it serves only to clarify the claim language. Applicant respectfully submits

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that the amendment of claim 1 has placed the claimed invention in condition for allowance for the following reasons:

Claim Rejection under 35 U.S.C. § 102(b)

In the Office Action dated August 21, 2002, claims 1 and 3 are rejected under 35 U.S.C. §102(b) as being anticipated by Sun's U.S. Patent No. 6,034,461 (hereinafter as "Sun").

To anticipate a claim, each and every element of the claim must be taught, either expressly or inherently, in a single prior art reference. See e.g., Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631 (Fed. Cir. 1987) ("a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.")

Applicant respectfully submits that the amended claim 1 is not anticipated by Sun because, as shown below, (1) Sun does not disclose that the yoke, the upper insulator, and the lower insulator of Applicant's claimed invention are each formed as a single body; and (2) Sun does not disclose that the yoke contains two cut-outs 14 symmetrically defined at the outer periphery of the yoke and each of the upper insulator and the lower insulator contains a pair of openings, corresponding to the cut-outs of the yoke to facilitate the winding of wires.

As shown in Figure 1 of the claimed application and the amended claim 1, the stator of the present invention is composed of a yoke (10), an upper insulator (20) and a lower insulator (21). More particularly, each of these elements is formed as a single body. In contrast, Sun's stator comprises a stator (30), an upper insulator and a lower insulator, but each element is composed of two parts as shown in Figure 4 of the cited reference.

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Specifically, the stator (30) of Sun includes a first lamination (31) and a second lamination (32). The upper insulator is composed of a first plate (216a) and a second plate (216c). The lower insulator is composed of a third plate (216b) and a fourth plate (216d).

Sun's requirements of a "two-part" yoke, a "two-part" upper insulator and a "two-part" lower insulator for its assembly, are further evident as follows: First, the first plate 216a of Sun's stator and the third plate 216b is required to respectively mount on the upper and lower ends of the first lamination 31, then wires are wound on the first neck portion 310 to form a coil 20a (See Column 3, lines 33-36, and Figure 9). The same operation is repeated for the assemblage of the second plate 216c, the fourth plate 216d and the second lamination 32 (See Column 4, lines 2-5). Then "[t]hese two laminations wounded with coils are assembled." (See Column 2, lines 46-47).

If the two laminations and the four plates are first assembled so as to form an "integral" yoke, an "integral" upper insulator and an "integral" lower insulator (here "integral" means "as a unit" like the Examiner explains), subsequent installation of the coils to the pre-assembled stator would be impossible.

This is due to another factor that distinguish Applicant's claimed invention from that of Sun, i.e., Applicant's claimed invention has two symmetrically located cut-outs 14 defined on the outer periphery of the yoke, and a pair of openings 204, 214 respectively defined at the outer periphery of the upper insulator and the lower insulator. (See Figure 1). The cut-outs and openings allow the passage of the wires, i.e., the wires can pass through the openings 204, 214 and cut-outs 14 into the passages formed by the joint edges 207, 217 to form the stator coils 40

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which are wound around and bind the upper and lower insulators 20, 21 together with the yoke

10.

Sun does not have cut-outs in the stator and openings in the upper insulator and lower insulators as those claimed in Applicant's claimed invention (See Sun Figures 2, 5 and 10). Applicant further disagrees with the Examiner's assertion in the Final Office Action, which equates the opening 317 of Sun's stator to the cut-outs 14 of Applicant's claimed invention. 317 is only an opening or a "trench" as shown at the edge of the first lamination. This opening is essentially closed when a second "trench" 327 at the opposite edge of the second lamination is connected to that of the first lamination, leaving a hole 40 in between. See Figure 10 of Sun. In other words, the opening 317 of Sun is for the engagement of the two laminations 31 and 32 and is completely different from cut-outs 14 of Applicant's claimed invention. As a result, the wires in Sun cannot possibly be wound around the opening 317 for the formation of the coils as that described by Applicant. Also, the opening 317 does not and cannot possibly communicate with the winding slots, as evident by Figures 4 and 5.

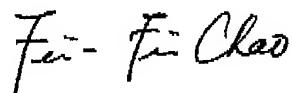
In sum, Sun fails to teach a "single-body" yoke, a "single-body" upper insulator and a "single-body" lower insulator, as well as two symmetrically located cut-outs at the outer periphery of the yoke and a pair of openings at the outer periphery of each of the upper insulator and the lower insulator to allow the passage of the wires. Therefore, Applicant's claimed invention is not anticipated by Sun.

In view of the foregoing, it is respectfully submitted that the application is now in condition for allowance, and early action in accordance therewith is requested. In the event there is

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any reason why the application cannot be allowed in this current condition, it is respectfully requested that the Examiner contact the undersigned at the number listed below to resolve any problems by Interview or Examiner's Amendment.

Respectfully submitted,



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Date: February 24, 2003

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

1. (Twice Amended) A stator of an alternating current motor, the stator comprising:
a yoke (10) having an outer annular member (11) and an inner annular member (12)
integrally formed therewith, two winding slots (13) symmetrically defined at two opposite lateral
sides between the outer and inner annular members (11, 12), and two cut-outs (14) symmetrically
defined at two opposite sides of the outer annular member (11) and respectively communicating
with middle positions of the winding slots (13); wherein said yoke is a single-body;

upper insulator and lower insulator (20, 21) respectively assembled on upper and lower
ends of the yoke (10), and respectively having two outer rings (201, 211) and two inner rings
(202, 212) integrated therewith corresponding to the outer and inner annular members (11, 12),
two pairs of slots (203, 213) respectively defined at opposite sides thereof corresponding to the
winding slot (13) of the yoke (10), and two pairs of openings (204, 214) respectively defined at
opposite sides of the outer rings (201, 211) corresponding to the cut-outs (14); wherein each of
said upper insulator and said lower insulator is a single-body;

wherein first bulged outer edges (205) are formed around outer sides of upper ends of the
outer rings (201) of the upper insulator (20), and first bulged inner edges (206) are formed
around inner sides of upper ends of inner rings (202) of the upper insulator (20);

wherein second bulged outer edges (215) are formed around outer sides of lower ends of
the outer rings (211) of the lower insulator (21), second bulged inner edges (216) are formed
around inner sides of lower ends of inner rings (212) of the lower insulator (20), and the lower
ends of the slots (203) and upper ends of the slots (213) are respectively formed with bulged

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joint edges (207, 217) around, whereby the upper and lower insulators (20, 21) are respectively assembled on the yoke (10) by means of the joint edges (207, 217) respectively inserted into the corresponding winding slot (13) of the yoke (10);

whereby after the upper insulator and lower insulators (20, 21) are respectively assembled on upper and lower ends of the yoke (10), wires of stator coils are respectively wound around the upper and lower insulators (20, 21) and bind the upper and lower insulators (20, 21) together with the yoke (10).